Chapter 2. Developing a Clean Energy-Environment Action Plan

Summary

This chapter describes the process for developing a *Clean Energy-Environment Action Plan* that helps states provide for clean, low-cost, reliable energy. Drawing upon states' experiences, it describes the typical steps for establishing a collaborative process, setting clean energy goals, identifying and evaluating clean energy policies, and developing an implementation strategy.

The *Guide to Action* helps states analyze and compare policies to develop a plan for meeting their clean energy objectives: a *Clean Energy-Environment Action Plan*. It helps states implementing a *Clean Energy-Environment Action Plan:*

- Assess the environmental, energy, and economic benefits of their clean energy portfolios.
- Identify and remove market, regulatory, and institutional barriers to clean energy.
- Integrate clean energy with specific environmental protection or economic development objectives.
- Enhance coordination across state agencies and develop partnerships with electric and natural gas utilities, businesses, environmental groups, and clean energy industries.
- Identify opportunities to coordinate and leverage ongoing state activities and investments, federal programs, and private sector investments.
- Implement policies with effective design and evaluation characteristics.

The *Clean Energy-Environment Action Plan*

Under the U.S. Environmental Protection Agency's (EPA's) Clean Energy-Environment State Partnership Program, states create a *Clean Energy-Environment Action Plan* that outlines policies to further clean energy and environmental goals and provide public health and economic benefits.

EPA provides planning, policy, technical, analytical, and information resources, like the *Clean Energy-Environment Guide to Action*, to help states develop and implement their plans.

The *Clean Energy-Environment Action Plan*

A *Clean Energy-Environment Action Plan* outlines a clear strategy to deliver clean, low-cost, and reliable energy to state residents through the use of energy efficiency, renewable energy, and clean distributed generation (DG). The plans focus explicitly on clean energy but may be developed in conjunction with broad state planning processes, such as comprehensive energy or air quality planning (see Section 3.2, *State and Regional Energy Planning*), state-wide sustainability planning, and resource-specific planning for energy efficiency or clean energy supplies. In addition, many states have developed climate change action plans that include clean energy as a key strategy for saving energy and lowering greenhouse gases.[4] States have also developed "lead by example" action plans focused on state facilities and operations (see Section 3.1, *Lead by Example*).

[4] Twenty-eight states and Puerto Rico have developed climate change action plans (EPA 2005).

States use a range of programs and strategies to achieve their clean energy goals. These programs take many forms and are developed and implemented through multiple agencies and regulatory jurisdictions. A *Clean Energy-Environment Action Plan* can serve as a platform and roadmap for engaging relevant state agencies, including nongovernment stakeholders. In addition, states often work beyond state boundaries on a collaborative basis to develop regional clean energy strategies (e.g., the Western Governors' Clean and Diversified Energy Initiative).

In each case, the steps involved in developing a *Clean Energy-Environment Action Plan* are similar from state to state. They typically include the following:

1. Create a collaborative.
2. Establish a quantitative goal or goals based upon future energy use expectations and the potential for clean energy in the state.
3. Identify both existing and new clean energy policies and programs.
4. Design and evaluate the impacts of policies.
5. Recommend specific actions for state decision-makers.

The order of these steps can vary from state to state. For example, some states develop broad goals before conducting stringent analysis. These goals may be based on regional goals or agreements, other state activities, or political considerations. After the goal is adopted, state agencies typically determine the most effective way to achieve it. Alternatively, some states conduct thorough analyses of their clean energy potential, evaluate policy options, and assess related opportunities before determining a goal. This range of approaches to goal-setting allows each state to proceed in a manner suited to local circumstances. Regardless of the order, however, these steps are common across all plans. Each step is described in greater detail as follows.

1. Create a Collaborative

States have found it particularly useful to reach out to the parties in their states that are interested in and/or may be affected by changes in energy and environmental policies within the state. Key players typically include but are not limited to:

- *The governor and his/her staff,* who can provide leadership and ensure follow-through.
- *State legislatures,* that will ultimately need to provide leadership on policies requiring legislative action. State legislatures' interests and concerns may vary depending on the impact of energy policies on their constituents, including citizens and representatives from various economic sectors.
- *State agencies,* which maintain government data and analytic capacity, and have policy and implementation jurisdiction in the sectors of interest.
- *Universities,* which may provide expertise, analytic support, and/or a neutral forum to convene stakeholder meetings.

Stakeholders can include:

- *Utilities,* which can provide technical expertise and data.
- *Independent system operators (ISOs) and regional transmission organizations,* which can provide technical analyses and information and which are key stakeholders in many clean energy policies.
- *Independent power producers,* independent transmissions owners, and energy suppliers, which can provide information and analysis about electricity markets.
- *Environmental and consumer organizations,* which can provide data, analysis, and feedback.
- *Other private sector interests,* which often maintain significant data and analytic capabilities relevant to energy planning, and which may be affected by new energy policies.
- *The public,* which provides new ideas, input, and/or feedback to the state.

2. Establish a Quantitative Goal or Goals

Each state has its own unique clean energy potential and economic, environmental, energy, and other priorities. Quantitative clean energy goals take those attributes into account and define a specific level of cost-effective clean energy the state can strive to acquire during a particular period of time. Clear policy objectives, such as the development of a clean energy goal or usage targets for specific resources, ensure that all players know the expected outcome. Quantitative goals can be short-term and/or long-term and can include interim milestones. They provide for ease of measurement and reporting, offering a straightforward means of evaluating progress and providing feedback when mid-course corrections are necessary.

Several states have set clear quantitative clean energy goals and are working toward achieving them. For example, New York adopted "the goal of reducing statewide primary energy use in 2010 to a level that is 25% below 1990 energy use per unit of Gross State Product (GSP) and...the goal of increasing the share of renewable energy as a percentage of primary energy use 50% by 2020, up from 10% in 2000 to 15% in 2020" (NYSERDA 2002). The Oregon Renewable Energy Action Plan established a goal to meet 25% of state government's total electricity needs through new renewable energy sources by 2010 and 100% by 2025 (State of Oregon 2005). More examples of state energy goals are presented in Section 3.2, *State and Regional Energy Planning.*

Successful states have considered the following two actions, at a minimum, as they developed their goals.

Develop a Baseline and Forecast

States begin by developing or refining a baseline inventory of their energy use and emissions and making projections about the future. This typically includes making a projection of energy use by end-use sector across the state and load growth forecasts that provide utility-specific data. The baseline and projection enable a state to understand energy and emissions growth expectations and identify particular sectors or sources that might be key targets for policy intervention.

The U.S. Department of Energy (DOE) offers state-level energy use data that can be projected into the future. Some states, such as New York, have their own data or support state university energy models and methods that enhance DOE state energy data and generate a customized baseline and forecast. Alternatively, other states such as Connecticut and Hawaii have used proprietary models, such as the Integrated Planning Model or Energy 2020, to help with state energy modeling. These models make predictions of energy usage and emissions for the electricity sector and the entire energy sector, respectively. Whichever model states choose, they have found it useful to select one that is widely accepted by experts in the field and is clear or "transparent" in its assumptions or workings. This prevents challenges or confusion later when trying to interpret the results.

Assess Energy Efficiency and/or Renewable Energy Potential

States have found it particularly useful to conduct energy efficiency and/or renewable energy potential analyses to determine where the greatest opportunities exist. The findings of these analyses help states identify opportunities and determine the feasibility of different goals based upon technologies or resource availability.

For example, Georgia recently commissioned a study, *Assessment of Energy Efficiency in Georgia,* that "identified substantial, cost-effective energy efficiency potential." The state "commissioned the report to guide the state's efforts in developing the most energy-efficient economy possible (and)...believes the results of this study provide an accurate roadmap toward achieving this goal" (ICF Consulting 2005). Another energy efficiency potential study, *Nevada Energy Efficiency Strategy*, identified policies that would yield about $4.8 billion in net economic benefits, save more than 8,000 gigawatt-hours (GWh) of electricity and 16 billion cubic feet of natural gas per year, and lower projected statewide electricity use by more than 20% by 2020 (Geller et al. 2005). Similar studies can be conducted to assess the resource potential for renewable energy in particular states. One study, *Energy Efficiency and Renewable Energy*

Resource Development Potential in New York State, "found large amounts of technical potential for efficiency and renewable energy…that…would be economical compared to conventional electricity generation" (NYSERDA 2003).

3. Identify Clean Energy Policies and Programs: Existing and New

Clean Energy-Environment Action Plans are intended to help states identify policies currently in place, as well as best-practices from other states. Chapter 3 through Chapter 6 of the *Guide to Action* provide information and resources pertaining to 16 specific programs and policies states have found particularly promising for furthering cost-effective clean energy. States have discovered that these policies help level the playing field for clean energy options that are hindered by existing policy barriers.

The *Guide to Action* helps states determine an appropriate mix of policies to consider for further analysis under their *Clean Energy-Environment Action Plan*. Table 1.2 in Chapter 1 presents details about programs and policies that focus on clean energy opportunities for homes, businesses, public institutions, and electricity generation. While not covered in the *Guide to Action,* transportation sector policies are also important. Several states are integrating transportation policies into their clean energy planning processes.

When identifying promising policies, states typically follow three steps: inventory policies currently in place, identify new policies, and establish criteria to assess policies.

Inventory Existing Policies

States often evaluate the success of existing clean energy programs to determine if they should be extended, expanded, or modified to support the new or revised clean energy-environment goal. States can start by using the policies in the *Guide to Action* as a checklist. States can also review energy plans, air quality plans, and greenhouse gas emission reduction strategies developed by other states.

When considering policy options, states can simultaneously evaluate barriers to advancing cost-effective clean energy. For example, approval processes designed for large distributed generation systems seeking to connect to the grid may be too onerous to allow small systems to come online. Reexamining interconnection standards (discussed in Section 5.4, *Interconnection Standards*) can stimulate the growth of clean energy by making the process more appropriate to the size and scale of the project and cost-effective for the generation owners.

Identify New Policies

Once states have determined which clean energy programs and policies they already have in place, they can use the *Guide to Action* to identify new ones that they might consider implementing. For each policy or program, the *Guide* describes objectives and benefits, state examples, roles and responsibilities of key players, opportunities for coordination with other programs or policies, best practices for policy design and evaluation, action steps for states, and resources for additional information. States can use the information about other states' successes and best practices to identify those options that they would like to explore further for their own *Clean Energy-Environment Action Plan*.

Establish Criteria to Assess Policies

States determine the criteria they use to evaluate their clean energy options. The criteria vary from state to state depending on each state's unique goals and circumstances. Criteria can include but are not limited to: cost-effectiveness, ease of implementation, political feasibility, pollution reduction effectiveness, payback period, and benefit to the economy (e.g., impacts on jobs). To avoid confusion, states have found it useful to define the criteria upfront. For example, when using cost-effectiveness as a criterion, states typically clarify whether they are using dollar per kilowatt hour saved or dollar per unit of emissions saved. States have discovered that this prevents confusion and helps to identify the types of information and tools needed to assess the policies.

States have found it helpful to evaluate initial policy recommendations according to qualitative criteria

(e.g., ease of implementation, political feasibility), to identify options suitable for further consideration. These policies can then be ranked and sorted according to the criteria chosen.

4. Design Policies and Evaluate Their Impacts

Once states determine the policies they would like to consider for inclusion in their *Clean Energy-Environment Action Plan,* they proceed to design their specific policies and evaluate the quantitative impacts of the various options. There are several design issues that have arisen as states move forward with the policy evaluation process. The design of the policies can have a profound effect on the impact of the policy. The impacts frequently considered include, but are not limited to, impacts upon energy use and supply, economic indicators, greenhouse gas levels, air quality, and human health. There are numerous tools available to states to help them assess the impacts of the policies.

Design Issues

The impacts of a policy vary depending upon the design of the policy. Clearly, the impact of a renewable portfolio standard set at 2% to be achieved in 10 years will differ significantly from one set at 25% to be achieved in five years. States have found it valuable to evaluate policies using different designs or specifications to find the ones that best meet their criteria.

It is often practical for states to consider how policies relate not just to their goal but to each other. Some policies may effectively complement each other while others may create barriers for other policies. For example, public benefits funds (PBFs) for energy efficiency can be used to bolster the effectiveness of building codes through support for implementation and enforcement. (More information about both of these options is available in Section 4.2, *Public Benefits Funds for Energy Efficiency* and Section 4.3, *Building Codes for Energy Efficiency*, respectively.) As mentioned above, some interconnection standards policies can impede clean energy, depending on how they are defined (see Section 5.4, *Interconnection Standards*).

Finally, states have found it advantageous to identify the type of action, the key players required, and the time frame for implementation when designing a policy. For example, a regulatory action would require one set of specific agencies, stakeholders, and participants and occur on one time line, whereas an energy efficiency public awareness campaign may require an entirely different set of players and take place over varying time frames. States have found it helpful to identify this information upfront so that the appropriate experts can be involved and contribute their expertise early in the process. These experts assist in shaping the policy to maximize its effectiveness. States have realized that this type of planning and specificity upfront improves coordination across programs, ensures that key players know what is expected of them, and facilitates future measurement, evaluation, and communication of results. This process also facilitates the development of an implementation strategy that is a key component of a *Clean Energy-Environment Action Plan*.

Impact Analyses

Once policies are designed, states can use analytic tools to evaluate the options based on the criteria they have developed. The tools enable states to quantify the impacts of the various policies and rank them according to the agreed upon criteria. Usually, this includes an assessment of the energy, economic, and/or environmental and public health impacts of the options, sometimes referred to collectively as co-benefits. States have found it particularly helpful to measure the impact of the policies against the goal established in Step 2. This will enable the collaborative to choose those policies that bring a state closest to its goal.

While analytic tools necessarily involve predictions and uncertainty, they can address a number of specific questions. It is important to thoroughly understand the strengths and weaknesses of the models used, the ways they interact with each other, and the underlying assumptions to avoid misinterpreting the results. As described above, states have found it useful to select models that are widely accepted by experts in the field and are clear or "transparent" in their assumptions and structures.

EPA offers or supports several tools or resources to help states assess the impacts of policies. States can use the tools listed in Figure 2.1 to enhance their assessment of clean energy-environment policies.

Connecticut provides an example of how states can use these tools and resources when developing their plan. The state's 2005 Climate Change Action Plan includes 55 specific recommendations (over 30 of which promoted cost-effective clean energy) to the Governor's Steering Committee (GSC) on Climate Change. The governor and the GSC accepted the majority of the 55 recommendations and requested that the state conduct additional analyses on the rest.

During the policy analysis phase, Connecticut used several modeling tools to conduct customized macroeconomic analyses of four clean energy options. Connecticut worked with EPA specifically to quantify the economic, air quality, and health co-benefits. EPA's new Co-Benefits Risk Assessment (COBRA) model showed that while "the state's (existing) energy efficiency program...was known to achieve a $3 to $1 direct return on investment based on electricity savings...an additional $4 to $1 payback in terms of reduced health costs and public health benefits was identified (through COBRA) as a result of reductions in criteria air pollutants" (Connecticut GSC on Climate Change 2005). Connecticut also used the Greenhouse Gas Equivalencies Calculator to estimate the potential impacts of the 55 recommendations. The state presented its findings to the state legislature in the revised Climate Change Action Plan 2005. Four key

Figure 2.1: Tools and Resources for Assessing the Benefits of Clean Energy

EPA offers or supports several tools or resources to help states assess the benefits of clean energy policies. Information about these and other tools can be found at: http://epa.gov/cleanenergy/stateandlocal/resources.htm.

Energy-Related Tools for States

To learn more about modeling energy policies, EPA provides:

- Guidance on how to effectively model energy efficiency and/or renewable energy policies.
- Support for customized analyses of energy efficiency and/or renewable energy policies for states.

Economic Benefits-Related Tools for States

To determine the technological and economic potential of energy efficiency and/or renewable energy for states, EPA supports:

- Energy efficiency and/or renewable energy potential studies.

To assess the macroeconomic impacts of policies or technological opportunities, EPA supports:

- Rocky Mountain Institute (RMI) Community Energy Opportunity Finder.
- Customized analyses of the impacts of energy efficiency and/or renewable energy policies for partners in the Clean Energy-Environment State Partnership Program.

Environmental and Human Health Benefits

To assess air pollution and greenhouse gas effects of clean energy projects, EPA supports:

- Clean Air and Climate Protection Software, developed by State and Territorial Air Pollution Program Administrators (STAPPA), Association of Local Air Pollution Control Officials (ALAPCO), and International Council for Local Environmental Initiatives (ICLEI).

To assess the air quality, public health benefits, and health cost savings of air pollution reductions, EPA developed:

- The Co-Benefits Risk Assessment (COBRA) screening model.

To better understand greenhouse gas emissions and energy use in your state, EPA supports:

- State Inventory Tool (SIT).
- Emissions Forecasting Tool.
- State Energy Carbon Dioxide (CO_2) Data Tables.
- Emissions and Generation Resources Integrated Database (eGRID).

To translate greenhouse gas emissions into easily understood metrics, EPA developed the:

- Greenhouse Gas Equivalencies Calculator.

committees of the Connecticut General Assembly (the Environment, Energy and Technology, Commerce, and Transportation committees) supported the new plan.

5. Recommend Specific Actions for State Decisionmakers

Once policy options have been assessed and ranked according to the desired criteria, the collaborative typically reviews the findings. Based upon the rankings and discussion among the stakeholders, recommendations for action are presented in the *Clean Energy-Environment Action Plan.* A sample outline for a state action plan, based on Connecticut's 2005 Climate Change Action Plan, is presented in Figure 2.2 on page 2-8.

State Clean Energy-Environment Action Plans typically include the following components:

- *The Clean Energy-Environment Goal(s),* established in Step 2.
- *Descriptions of the Policies Recommended in Order to Achieve the Goal,* developed in Steps 3 and 4.
- *Projected Impacts of the Policies As They Relate to the Goal,* developed in Step 4.
- *An Implementation Strategy,* outlined in Step 4.

A fifth component is often:

- *A Measurement, Evaluation, and Reporting Plan.* As states design and evaluate clean energy policy options, they find it beneficial to consider in advance how to measure success. States often specify an evaluation strategy, a time line for reporting progress, the key metrics to be reported, and the key players involved. This measurement, evaluation, and reporting plan enables states to regularly check their progress against their goals and adjust their course as needed.

Together, these pieces present a strategy to deliver clean, low-cost, and reliable energy to a state and its constituents through the use of energy efficiency, renewable energy, and clean DG. Several states have successfully completed clean energy plans that provide useful models for other states interested in reaping the multiple benefits of cost-effective clean energy. Examples and links to many of these plans are listed in the *Information Resources* section presented on page 2-11.

Figure 2.2: Sample Outline for a *Clean Energy-Environment Action Plan*

(Based on the 2005 Connecticut Climate Change Action Plan at: http://www.ctclimatechange.com/StateActionPlan.html)

Connecticut's *Climate Change Action Plan* is a blueprint for achieving cost-effective greenhouse gas emissions reductions by a specified future date. The Plan was developed by a multi-sector stakeholder group with guidance from state agencies. The resulting climate change policy recommendations support a range of clean energy options, including renewable energy, energy efficiency, and clean distributed generation.

1. Goals

The primary goal of Connecticut's Climate Change Action Plan is to establish a timetable for achieving a specific greenhouse gas emission reductions target, as follows:

To reduce greenhouse gas emissions to 1990 levels by 2010 and an additional 10% below that by 2020.

Other states may elect to frame their goals in terms of metrics such as installed clean energy capacity, clean energy consumption, or air pollution effects.

2. Policy Descriptions

Connecticut stakeholders recommended the following policies to lower greenhouse gas emissions, encourage clean energy supply, and support efficient end-uses.

Residential, Commercial, Industrial Sectors: 25 policies, including:

- Appliance standards
- Heat pump water heater replacement program
- Weatherization Assistance Program (WAP)
- ENERGY STAR Homes Program
- High-performance buildings: schools and other state-funded buildings
- Encourage CHP

Agriculture, Forestry, Waste Sectors: 10 policies

Transportation Sector: 9 policies

Electricity Generation Sector: 9 policies, including:

- Renewable energy strategy (RES)
- Renewable portfolio standard
- Government clean energy purchase
- Production tax credit (PTC)
- Clean Energy Choice (Green power option)
- Renewable Energy Certificates (Green tags)
- Restore Clean Energy Fund
- Energy efficiency and CHP
- Regional cap-and-trade program

Education and Outreach: 1 policy

Greenhouse Gas Reporting: 1 policy

(continued on next page)

Figure 2.2: Sample Outline for a *Clean Energy-Environment Action Plan (continued)*

3. Policy Impacts and Recommendations

Consistent with Connecticut's focus on climate change, all recommended policies are evaluated for their potential to reduce greenhouse gases. Costs, benefits, and "payback" are also analyzed. For selected measures, the state measures co-benefits such as energy savings and air pollution reductions.

Connecticut's policy analysis framework establishes an emissions baseline forecast, sets a reductions goal (with respect to the baseline), and evaluates each measure in the context of the goal. This approach is summarized below on an aggregate and sector-by-sector basis.

All Policies:

Summary of Projected Connecticut Greenhouse Gas Reductions
million metric tons of carbon dioxide-equivalent ($MMTCO_2e$)

	2010	2020
Future Baseline	48.14	56.15
New England Governors/Eastern Canadian Premiers Targets (1990 levels by 2010, 10% below 1990 levels by 2020)	42.40	38.16
Reductions Needed to Meet New England Governors/Eastern Canadian Premiers Targets	5.74	17.99
Projected Reductions By Sector		
Transportation	0.35	3.84
Residential, Commercial, Industrial	4.03	7.29
Agriculture, Forestry, Waste	1.21	1.30
Electricity	3.07	6.89
Connecticut Climate Change Action Plan Total Projected Reductions	**8.66**	**19.32**

4. Implementation Strategy

Following the release of Connecticut's Climate Change Action Plan, the state established a policy implementation strategy consisting of the elements below.

- Present recommendations to the governor and legislature for approval.
- Conduct further analyses of the costs, benefits, and implementation pathways associated with the remaining action items in the stakeholder report that were not slated for immediate implementation.
- Continue to seek public input for new ideas to reduce greenhouse gas emissions, along with information on their cost, benefits, and implementation pathways.

5. Measurement, Evaluation, Reporting

The state also established procedures to build on existing analysis, track progress, and maintain support.

- Track progress on each of the measures approved for immediate implementation.
- Continue to calculate greenhouse gas benefits and costs.
- Continue to analyze the co-benefits of priority policy options.
- Obtain stakeholder feedback on the Action Plan and its implementation.
- Assess progress on each measure and develop an annual report on results.
- Present first annual progress report to the General Assembly at the end of 2005.

(continued on next page)

Figure 2.2: Sample Outline for a *Clean Energy-Environment Action Plan (continued)*

Progress to Date

Connecticut's experience demonstrates that fostering stakeholder buy-in and state government coordination can help achieve success. The following three policies—initially recommended in the Action Plan—are now in place:

Appliance Standards

- Connecticut adopted new energy efficiency standards for a range of residential and commercial appliances and products in May 2004.
- *An Act Concerning Energy Efficiency Standards* will save more than $380 million in energy costs by 2020, conserve more than 430 GWh of electricity, reduce summer peak electricity demand by more than 125 MW, and avoid the emissions of about 65,000 metric tons of carbon.
- The products covered by the Connecticut law include torchiere lighting fixtures, building transformers, commercial refrigerators and freezers, traffic signals, exit signs, large packaged air conditioning equipment, unit heaters, and commercial clothes washers.

RPS

- Connecticut's RPS requires 10% of all retail electricity sales to come from renewable resources by 2010.
- The legislature expanded it in June 2005 by adding new "Class III" requirements covering energy efficiency and CHP plants.
- Under the new Class III requirements, electricity suppliers must purchase 1% of supply from efficiency and CHP by 2007 and 4% by 2010.

Leading by Example

- Connecticut is committed to purchasing 20% of the state government's electricity from "clean" sources by 2010.
- To help accomplish this goal, the Department of Environmental Protection (DEP) announced in November 2005 that it will receive 100% of its yearly electricity (7.6 million kWh) from renewables. This will reduce CO_2 emissions by 3,716 tons a year, which is equivalent to the total electrical needs of 670 households or taking 730 cars off the road for one year.

Information Resources

Clean Energy Potential Studies

Title/Description	URL Address
State Clean Energy Potential Studies	
Assessment of Energy Efficiency in Georgia. 2005. Prepared for Georgia Environmental Facilities Authority by ICF Consulting.	http://www.gefa.org/pdfs/assessment.pdf
Connecticut Conservation and Energy Efficiency: Recent Performance, Future Potential. 2004. Study conducted for the Connecticut Conservation Management Board. December 2.	http://www.easternct.edu/depts/sustainenergy/Upcoming%20events/CT%20Energy%20Future/Presentations/SchlegelC&LM_CTEnergyFuturesDec04f.ppt
Discussion of Proposed Energy Savings Goals for Energy Efficiency Programs in California. 2003. California Energy Commission (CEC). September.	http://www.energy.ca.gov/reports/2003-09-24_400-03-022D.PDF
Energy Efficiency and Renewable Energy Resource Development Potential in New York State, Volume 1: Summary Report. Prepared by Optimal Energy Inc. for NYSERDA. August 2003.	http://www.nyserda.org/sep/EE&ERpotentialVolume1.pdf
Nevada Energy Efficiency Strategy. 2005. Southwest Energy Efficiency Project (SWEEP): H. Geller, C. Mitchell, and J. Schlegel. January.	http://www.swenergy.org/pubs/Nevada_Energy_Efficiency_Strategy.pdf
Nevada Statewide Energy Conservation Plan.	http://dem.state.nv.us/sweep.htm#INTRODUCTION
The Potential for Energy Efficiency in the State of Iowa. Oak Ridge National Laboratory. June 2001.	http://www.ornl.gov/sci/btc/apps/Restructuring/IowaEEPotential.pdf
Regional Energy Efficiency Potential Studies	
Air Pollution Prevention Forum Documents. Western Regional Air Partnership (WRAP).	http://www.wrapair.org/forums/ap2/docs.html
A Balanced Energy Plan for the Interior West. Western Resource Advocates. 2004.	http://www.westernresourceadvocates.org/energy/bep.html
Conservation Regional Technical Forum.	http://www.nwppc.org/energy/rtf/Default.htm
Economically Achievable Energy Efficiency Potential in New England. Northeast Energy Efficiency Partnerships by Optimal Energy.	http://www.neep.org/files/Full_Report.pdf
Emerging Energy-Saving Technologies and Practices for the Buildings Sector As of 2004. ACEEE.	http://aceee.org/pubs/a042toc.pdf
Energy Efficiency and Economic Development in New York, New Jersey, and Pennsylvania. 1997. American Council for an Energy-Efficient Economy (ACEEE), S. Nadel, S. Laitner, M. Goldberg, N. Elliott, J. DeCicco, H. Geller, and R. Mowris.	http://www.aceee.org/store/proddetail.cfm?CFID=784272&CFTOKEN=63415223&ItemID=98&CategoryID=7
5th Northwest Power Plan. Northwest Power and Conservation Council.	http://www.nwppc.org/energy/powerplan/default.htm

Title/Description	URL Address
National Energy Efficiency Potential Studies	
The New Mother Lode: The Potential for More Efficient Electricity Use in the Southwest. November 2002. SWEEP. H. Geller, director of SWEEP; ACEEE, Tellus Institute, Etc Group, Robert Mowris and Associates, and MRG & Associates.	http://www.swenergy.org/nml/
Southwest Energy Efficiency Project (SWEEP).	http://www.swenergy.org/

Clean Energy Plans and Planning Processes

(See also, *Information Resources* in Section 3.2, *State and Regional Energy Planning*)

Title/Description	URL Address
State Energy Efficiency Plans	
California's Secret Energy Surplus: The Potential for Energy Efficiency, September 2002. XENERGY, Inc., M. Rufo and F. Coito.	http://www.ef.org/documents/Secret_Surplus.pdf
Nevada Energy Efficiency Strategy, January 2005. SWEEP: H. Geller, C. Mitchell, and J. Schlegel.	http://www.swenergy.org/pubs/Nevada_Energy_Efficiency_Strategy.pdf
Texas Emissions Reduction Plan. Texas Natural Resource Conservation Commission. 2005.	http://www.tnrcc.state.tx.us/oprd/sips/terp.html
State Renewable Energy Plans	
Oregon Renewable Energy Action Plan. Oregon DOE. 2005.	http://egov.oregon.gov/ENERGY/RENEW/docs/FinalREAP.pdf
Regional Clean Energy Initiatives or Plans	
Harvesting Clean Energy. A New Economic Opportunity for the Rural Northwest.	http://www.harvestcleanenergy.org/pdfs/HCE_Action_Plan.pdf
Powering the South: A Clean & Affordable Energy Plan for the Southern United States. Renewable Energy Policy Project. January 2002.	http://www.repp.org/articles/static/1/binaries/pts_repp_book.pdf
Repowering the Midwest: The Clean Energy Development Plan. Environmental Law and Policy Center et al. 2001.	http://www.repowermidwest.org/plan.php
Southern Alliance For Clean Energy.	http://www.cleanenergy.org
Western Governors' Association (WGA) Clean and Diversified Energy Initiative.	http://www.westgov.org/wga/initiatives/cdeac/
State Climate Change Plans	
EPA Global Warming Web site, Global Warming-Actions. Information on climate change plans.	http://yosemite.epa.gov/oar/globalwarming.nsf/content/ActionsState.html
Several state climate change action plans, such as the Connecticut Climate Change Action Plan 2005, include clean energy policies as a key component of the state plan.	http://www.ctclimatechange.com/StateActionPlan.html
Stakeholder Processes	
Rhode Island Greenhouse Gas Process. 2002.	http://righg.raabassociates.org/index.asp

Title/Description	URL Address
Macroeconomic Impacts of Clean Energy Policies	
Clean Energy and Jobs: A Comprehensive Approach to Climate Change and Energy Policy. Prepared by J.P. Barrett, Economic Policy Institute, and J.A. Hoerner, Center for a Sustainable Economy, with S. Bernow and B. Dougherty, Tellus Institute. 2002.	http://www.epinet.org/content.cfm/studies_cleanenergyandjobs
Developing a Renewable Energy Based Economy for South Texas: A Blueprint for Development. U.S. Department of Commerce (DOC). 2002.	http://www.solarsanantonio.org/EDAReport.html
The Economic Impact of Generating Electricity from Biomass in Iowa: A General Equilibrium Analysis. G. Weisbrod and X. Lin. 1996.	http://www.edrgroup.com/pages/pdf/Biomass.pdf
Economic Impact of Renewable Energy in Pennsylvania: Analysis of the Advanced Energy Portfolio Standard. R. Pletka, J. Wynne et al. 2004. Black & Veatch Corporation, Overland Park, KS.	http://www.bv.com/energy/eec/studies/PA_RPS_F_AEPS_Analysis.pdf
Economic Impacts and Potential Air Emission Reductions from Renewable Generation & Efficiency Programs in New England: Final Report. W. Steinhurst, R. McIntyre et al. 2005. Synapse Energy Economics, Cambridge, MA.	http://raponline.org/Pubs/RSWS-EEandREinNE.pdf
Energy Efficiency and Economic Development in New York, New Jersey, and Pennsylvania. ACEEE. Nadel, S. Laitner, M. Goldberg, N. Elliott, J. DeCicco, H. Geller, and R. Mowris. 1997.	http://www.aceee.org/store/proddetail.cfm?CFID=784272&CFTOKEN=63415223&ItemID=98&CategoryID=7
Energy Efficiency and Economic Development in the Midwest. S. Laitner, J. DeCicco et al. 1995. ACEEE, Washington, D.C.	http://www.aceee.org/pubs/ed951.htm
Energy Efficiency and Renewable Energy Technologies as an Economic Development Strategy for Texas. M. Goldberg and S. Laitner. 1998. Economic Research Associates, Alexandria, VA.	URL not available.
Job Jolt. The Economic Impacts of Repowering the Midwest: The Clean Energy Development Plan for the Heartland. The Regional Economics Applications Laboratory for the Environmental Law & Policy Center. 2005.	http://www.repowermidwest.org/Job%20Jolt/JJfinal.pdf
The Public Benefit of Energy Efficiency to the Commonwealth of Massachusetts. RAND. 2002.	http://www.rand.org/publications/MR/MR1588/MR1588.pdf
The Public Benefit of Energy Efficiency to the State of Minnesota. M. Bernstein, C. Pernin et al. 2002. RAND Science and Technology, Santa Monica, CA.	http://www.rand.org/publications/MR/MR1587/MR1587.pdf
Renewable Resources: The New Texas Energy Powerhouse. A report on the economic benefits of renewable energy in Texas and how to keep them growing.	http://www.citizen.org/documents/Tx%20Energy%20Powerhouse.pdf

References

Title/Description	URL Address
Connecticut GSC on Climate Change. 2005. CCCAP. GSC on Climate Change. Connecticut Climate Change Web site, State Action Plan.	http://www.ctclimatechange.com/StateActionPlan.html
Environment Northeast. 2005. Energy Efficiency Potential: Energy Conservation Management Board, Maximum Achievable Potential Report Summary Information. Energy Efficiency Standards, Environment Northeast, Rockport, ME.	http://www.env-ne.org/Publications/Potential%20Energy%20Conservation%20Available%20to%20CT.pdf
EPA. 2005. Global Warming-Actions. Global Warming Web site. Accessed July 2005.	http://yosemite.epa.gov/oar/globalwarming.nsf/content/ActionsState.html
Geller, H., C. Mitchell, and J. Schlegel. 2005. Nevada Energy Efficiency Strategy. Prepared for the SWEEP. January.	http://www.swenergy.org/pubs/Nevada_Energy_Efficiency_Strategy.pdf
ICF Consulting. 2005. Assessment of Energy Efficiency Potential in Georgia. Prepared by ICF Consulting for Georgia Environmental Facilities Authority. Final Report. May 5.	http://www.gefa.org/pdfs/assessment.pdf
NYSERDA. 2002. New York State Energy Plan. New York State Energy Research and Development Authority, Albany, NY.	http://www.nyserda.org/Energy_Information/energy_state_plan.asp
NYSERDA. 2003. Energy Efficiency and Renewable Energy Resource Development Potential in New York State, Volume 1: Summary Report. Final Report. Prepared by Optimal Energy Inc., American Council for an Energy-Efficient Economy, Vermont Energy Investment Corporation, and Christine T. Donovan Associates for NYSERDA. August.	http://www.nyserda.org/sep/EE&ERpotentialVolume1.pdf
Schlegel, J. 2004. Conservation and Energy Efficiency: Recent Performance, Future Potential. Study conducted for the Connecticut Energy Conservation Management Board. December 2.	http://www.easternct.edu/depts/sustainenergy/Upcoming%20events/CT%20Energy%20Future/Presentations/SchlegelC&LM_CTEnergyFuturesDec04f.ppt
State of Oregon. 2005. Oregon Renewable Energy Action Plan. Oregon DOE. April 12.	http://egov.oregon.gov/ENERGY/RENEW/docs/FinalREAP.pdf